

REMARKS/ARGUMENTS

This is a preliminary amendment in a RCE Application. The Office Action mailed 09/05/2003 has been carefully reviewed. Reconsideration of this application, as amended and in view of the following remarks, is respectfully requested. The claims presented for examination are: claims 1-36.

35 USC 103 Rejection

In numbered paragraph 3 of the Office Action mailed 05/29/2003 claims 1-8, 10-17, 19-26, and 28-35 were rejected under 35 USC 103(a) as being unpatentable over the Busche et al reference (US 6,430,547) in light of the Agrawal reference (US 6,230,151).

Applicants have amended independent claims 1, 10, 19, and 28 and therefore have effectively amended all of the claims in the application. Applicants point out that the claims now presented for examination include structure and steps that are not shown in either the primary Busche et al reference or the secondary Agrawal reference.

In the Busche et al reference a data mining subsystem 410 uses collection point location database 404, physical sample database 406, and instrument reading database 408 to discover relationships between the collected physical samples and the collected instrument data. Spatial analysis subsystem 412 uses collection point location database 404, physical sample database 406, and instrument reading database 408 to process, plot, and display spatial information. GIS 402, data mining subsystem 408, and spatial analysis subsystem 412 transfer information as appropriate. GIS 402 may process position information as necessary for either spatial analysis subsystem 412 or data mining subsystem 408. Spatial analysis subsystem 412 receives relationship data from data mining subsystem 410 for plotting and displaying spatial relationships and

may return feedback information concerning spatial relationships to data mining subsystem 408. Spatial analysis subsystem 412 and data mining subsystem 408 may provide results to spatial display subsystem 414 that incorporates the results into various display for human interpretation and viewing.

The Agrawal reference shows generating a decision-tree classifier from a set of records, the tree having a plurality of nodes, the product comprising: a computer-readable medium; means, provided on the computer-readable medium, for directing the processors to cooperatively generate in the shared memory an attribute list for each attribute of the records, the attribute lists corresponding a current node and including tuples each having information on a record class; means, provided on the computer-readable medium, for directing the system to assign each attribute list of the current node to one of the processors; means, provided on the computer-readable medium, for directing each processor to access the attribute lists assigned to the processor, in the shared memory, and determine a best split for each attribute list; means, provided on the computer-readable medium, for directing the processors to cooperatively determine, through the shared memory, a global best split for all the attribute lists associated with the current node; means, provided on the computer-readable medium, for directing the processors to reassign each attribute list of the current node to one of the processors; means, provided on the computer-readable medium, for directing each processor to split the attribute lists reassigned to the processor according to the global best split into new attribute lists, the new lists corresponding to child nodes of the current node and residing in the shared memory; and means provided on the computer-readable medium, for directing the processors to process each newly created child node as the current node, until each attribute list for the newly child nodes includes only

tuples of the same record class. The Agrawal method uses the steps of: (a) generating cooperatively by the processors, in the shared memory, an attribute list for each attribute of the records, the attribute lists corresponding a current node and including tuples each having information on a record class; (b) assigning each attribute list of the current node to one of the processors; (c) each processor accessing the attribute lists assigned to the processor, in the shared memory, to determine a best split for each attribute list; (d) the processors cooperatively determining, through the shared memory, a global best split for all the attribute lists associated with the current node; (e) reassigning each attribute list of the current node to one of the processors; (f) each processor splitting the attribute lists reassigned to the processor according to the global best split into new attribute lists, the new lists corresponding to child nodes of the current node and residing in the shared memory; and (g) repeating steps (b)-(f) with each newly created child node as the current node, until each attribute list for the newly created child nodes includes only tuples of the same record class.

Neither the primary Busche et al reference or the secondary Agrawal reference shows the following structure and steps of applicants amended claims: (1) an object oriented module to read said data, (2) an object oriented module to determine the best manner to split said data according to some criterion, (3) an object oriented module to split said data, (4) a data mining system having a storage module, and an object oriented linking module for linking said decision tree system and said storage module, (5) providing data files containing objects having relevant features, (6) recognizing patterns among said objects based upon said relevant features, (7) reading said data from said data files using an object oriented module, (8) determining the best manner to split said data into subsets according to some criterion using an object oriented module, (9) splitting said

data using an object oriented module, (10) said object oriented module to determine the best manner to split said data is based on a OC1 algorithm, (11) said object oriented module to determine the best manner to split said data is based on a CART-LC algorithm, (12) said object oriented module to determine the manner to best split said data is based on an evolutionary algorithm, or (13) said criterion is the twoing rule.

Since both the primary Busche et al reference and the secondary Agrawal reference fail to show the missing structure and steps of Applicants amended claims, there can be no combination of the references that would produce Applicants' invention defined by the amended claims. The Busche et al and Agrawal references do not show the claimed combination.

Under MPEP §2142, there are three requirements to establish a prima facie case of obviousness. (1) There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. (2) There must be a reasonable expectation of success. (3) The prior art reference (or references when combined) must teach or suggest all the claim limitations.

Applicants respectfully submit that the MPEP §2142 requirements can not be met for the amended claims. The Busche et al reference, while mentioning object-oriented programming systems [COL 3 line 61 to COL 4 line 2] as quoted by the Examiner, does not show object-oriented systems in the context of decision trees. The Agrawal reference, as admitted by the Examiner, does not show object-oriented systems. The fact that neither of the two references shows object-oriented systems in the context of decision trees causes any combination of the two references to fail under the MPEP §2142 requirements. There is no

suggestion or motivation, in either of the two references or in the knowledge generally available to one of ordinary skill in the art, to modify the two references or to combine the two references because they lack object-oriented systems in the context of decision trees. The two reference separately, or even if combined, do not teach or suggest all the claim limitations of the amended claims because they lack object-oriented systems in the context of decision trees. Applicants respectfully submit that the 35 USC 103 rejection in numbered paragraph 3 of the Office Action mailed 09/05/2003 does not apply to the amended claims.

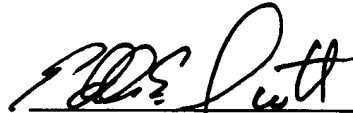
Allowable Subject Matter

In numbered paragraph 4 of the Office Action mailed 09/05/2003 claims 9, 18, and 27 were object to as depending from a rejected claim. Claims 9, 18, and 27 were indicated to be allowable if rewritten to overcome the rejection(s) under 35 USC 112 and to include all of the limitations of the base claim and any intervening claims. Applicants appreciate the indication of allowability.

SUMMARY

The undersigned respectfully submits that, in view of the foregoing amendments and the foregoing remarks, the rejections of the claims raised in the Office Action dated 09/05/2003 have been fully addressed and overcome, and the present application is believed to be in condition for allowance. It is respectfully requested that this application be reconsidered, that the claims be allowed, and that this case be passed to issue. If it is believed that a telephone conversation would expedite the prosecution of the present application, or clarify matters with regard to its allowance, the Examiner is invited to call the undersigned attorney at (925) 424-6897.

Respectfully submitted,



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